AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the Application:

Listing of the Claims

5 Pending Claims

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1 - 20 (canceled)

 (canceled): A-process-for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

reporting a perculance distillate consisting excessionly of material evilual excessions about 50°C, and about 425°C, comprising a mixture of sulfur containing entropes containing and other organic containing and derival from natural perculation with a course of hydrogen at hydrogen accordance conditions in the processes of a hydrogen along a satisfic to according to hydrogen along a satisfic to a solution of the processes of a hydrogen along a satisfic to

partitioning by distillation the hydrotreated distillate to provide at loast one low-boiling organic part consisting of a sulfur loan, mone aromatic rich fraction collected below a temperature in the range from 260°C, to 300°C, and a high-boiling organic part consisting of a sulfur-rich, mono-aromano-lean fraction.

contacting a gaseous source of the typen with at least a parties of the low builting regards parties at liquid reaction motivate communing a protection between the factor generous expension and comprises one or more catalyst metal rejected from the group consisting of chromium, molybdomen, bigned, manganese, iron, and platinum, employed as metal entitle while mined metal exists, while maintaining the reaction medium substantially free of halogen and/or halogen containing compounds, to form a liquid mixture composing by decarbons, a symmetol or games compounds, where of reaction and needs or medium, and the liquid mixture is more than I present by weight;

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separating from the mixture at least a first organic liquid of low density comparising—bydrocarbons—oxygenated—suitur-containing,—oxygenated—subregen containing and other oxygenated require engagic companies and acidic as produces and a least portions of the catalyst motal, water of reaction and acidic as produces—and a second separated liquid which was aqueous solution containing at least a portion of the critical and which was aqueous solution containing accompanies.

recovering a low-boiling exygenated produce having a low-content of nanogen; acidic co-products and a sulfur content of no more than 15 years.

- 22. (carceled): The process according to claim 21 wherein the 10 hydrogenation entries comprises at least one active metal, oriented from the group consisting of the A-transition elements in the Periodic Table, each incorporated onto an insert-support in an amount of from about 0.1 percent to about 20 percent by weight of the fold-eathlyst.
- 23. (canceled): The process according to claim: 21 which further to comprises recovering at least a portion of the heterogeneous asygmation catalyst system and injecting all or a portion of the recovered catalyst system into the liquid sention medium.
 - (canceled): The process according to claim 24 wherein the oxidizing agent comprises a guscous source of discreption.
- 20 25 (canceled): The process abouting to claim 21 Wherein the betweeneous oxygenation catalyst system comprises as oxygenation catalyst containing from about 1 percent to about 30 percent obvious as a support comprising gamma about 0.1 percent to about percent platinum on a support comprising gamma about 0.1 percent to about 5 percent platinum on a support comprising gamma about 0.1
- 25 26. (canceled): The process according to element to wherein the heterogeneous oxygenation catalyst system comprises obtaining analyticles or his muth malyticles and optionally magnesium.
 - 27. (canceled). The process according to claim 2 whomis the holosogeneous exogenation catalyst existent comprises gamen adminimately a catalyst

represented by the formula 4a, Cr2O2 in an amount of from about 0.1 persons to about 4.5-persons of the total eatalest graters

28. (canceled): The process according to olaim 21-factor comprising blending at least a parties of the law-builday organized product with according aparties of the high-building product to obtain components that exhibit sulfar levels of less than about 15-ppm. For refinery blending of altra-low-calliar transportation had:

29 & 30 (canceled)

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 (new): A process for the production of refinery transportation fuel or blending components for refinery transportation fuel, which process comprises:

reacting a petroleum distillate consisting essentially of material builing between about 50° C, and about 425° C, comprising a mixture of sulfur-containing, narogen-containing and other organic compounds derived from natural petroleum with a source of hydrogen at hydrogenation conditions in the presence of a hydrogenation catalyst to assist by hydrogenation removal of sulfur anti/or nitrogen from hydrotreated distillate;

partitioning by distillation the hydrographed distillate to provide at least one low-boiling organic part consisting of a sulfur-lean, mono-aromatic-rich fraction collected below a temperature in the range from 260° C, to 300° C, and a high-boiling organic part consisting of a sulfur-rich, mono-aromatic-lean fraction;

contacting a gaseous source of dioxygen with at least a portion of the low-boiling organic part in a liquid reaction medium containing a particulate heterogeneous oxygenation catalyst system which exhibits a capability to enhance the incorporation of oxygen into a mixture of liquid organic compounds and comprises one or more catalyst metal selected from the group consisting of chromium, molybdemum, bismuth, manganese, iron, and platinum, employed as metal oxide, mixed metal oxide, and/or basic salts of the metal or mixed metal oxide, while maintaining the reaction medium substantially free of halogen and/or halogen-containing compounds, to form a liquid mixture comprising hydrocarbons, oxygenated organic compounds, water of reaction, and acidic co-products, such that the oxygenation of the hydrocarbon portion of the liquid mixture is more than I percent by weight:

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separating from the mixture at least a first organic liquid of low density comprising hydrocarbons, oxygenated sulfur-containing, oxygenated nitrogen-containing and other oxygenated organic compounds and acidic co-products and a least portions of the catalyst metal, water of reaction and acidic co-products, and a second separated liquid which is an aqueous solution containing at least a portion of the oxidized sulfur-containing and/or nitrogen-containing organic compounds; and

recovering from the first organic liquid a low-boiling oxygenated product having a low content of nitrogen, acidic co-products and a sulfur content of no more than 15 ppm.

- 10 32. (new): The process according to claim 31 which further comprises contacting all or a portion of the separated first organic liquid with a neutralizing agent comprising a bicarbonate selected from the group consisting of sodium, potassium, barium, calcium and magnesium bicarbonate thereby recovering a low-boiling oxygenated product having a low content of acidic co-products.
- 15 33. (new): The process according to claim 31 which further comprises contacting least a portion of the high-boiling organic part with an immiscible phase comprising at least one organic peracid or precursors of organic peracid in a liquid reaction mixture maintained substantially free of catalytic active metals and/or active metal-containing compounds and under conditions suitable for 20 oxidation of one or more of the sulfur-containing and/or nitrogen-containing organic compounds:

separating at least a portion of the immiscible penicid-containing phase from the oxidized phase of the reaction mixture; and

contacting the oxidized phase of the reaction mixture with a solid surbest, an ion exchange resin, and/or a suitable immiscible liquid containing a solvent or a soluble basic chemical compound, to obtain a high-boiling product containing less sulfar and/or less nitrogen than the high-boiling fraction.

34. (new): The process according to claim 33 which further comprises blending at least a portion of the low-boiling oxygenated product with at 30 least a portion of the high-boiling product thereby obtaining components that exhibit

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sulfur levels of less than about 15 ppm, for refinery blending of ultra-low sulfur transportation fuels.

- 35. (new): The process according to claim 33 wherein the hydrogenation catalyst comprises at least one active metal, selected from the group consisting of the *d*-transition elements in the Periodic Table, each incorporated onto an inert support in an amount of from about 0.1 percent to about 20 percent by weight of the total catalyst.
- 36. (new): The process according to claim 53 which further comprises recovering at least a portion of the heterogeneous oxygenation catalyst system and 10 injecting all or a portion of the recovered catalyst system into the liquid reaction medium.
 - 37 (new): The process according to claim 31 wherein the heterogeneous oxygenation catalyst system comprises an oxygenation catalyst containing from about 1 percent to about 30 percent chromium as oxide and from about 0.1 percent to about 5 percent platinum on a support comprising gamma alumins.
 - 37. (new): The process according to claim 31 wherein the heterogeneous oxygenation catalyst system comprises chromium molybdate or hismuth molybdate and optionally magnesium.
- 38. (new): The process according to claim 31 wherein the heterogeneous oxygenation catalyst system comprises gamma alumina and a catalyst represented by the formula Na₂Cr₂O₇ in an amount of from about 0.1 percent to about 1.5 percent of the total catalyst system.